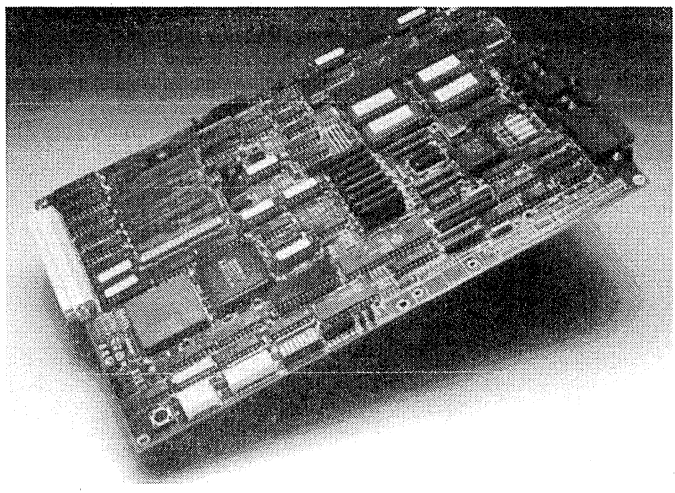
i960™ SA/SB EVALUATION BOARD



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i960™ SA/SB EVALUATION BOARD

The EV80960SX board is a general purpose evaluation tool for the i960™ SA/SB embedded processors. This evaluation board provides a high-performance DRAM subsystem, an interleaved EPROM subsystem, and a robust set of peripheral devices for benchmarking and debugging application code written for the i960 SA/SB embedded processors.

The EV80960SX is a great starter kit for your 32-bit application. The EV80960SX, NINDY debug environment, along with assembler and C-compiler (not provided) provide a seamless environment for developing code and evaluating the i960 SA/SB processors. The NINDY monitor provides code download capabilities from a number of popular development systems, including DOS-based PC's. Single step, breakpoints, register and memory display are among the full set of features provided by NINDY.

The board is provided with the following features:

- DRAM Subsystem operates at 1-0-0-0-0-0-0-0 wait states for read and write cycles in the burst mode. The DRAM subsystem runs at the maximum processor frequency of 16 MHz, using 100 ns fast page mode DRAMs. The DRAM subsystem can accommodate from 512 Kbytes to 4 Mbytes, using 4 or 8 ZIP-packaged DRAMs.
- Interleaved EPROM Subsystem executes burst program fetches with a 2-0-1-0-2-0-1-0 wait state performance.

The EPROM subsystem accommodates four, 32-pin or 28-pin 8-bit wide EPROMs with up to 150 ns access times.

- Flash EPROM Subsystem reads and writes two 8-bit wide Flash EPROMS.
- 8259A Interrupt Controller provides expanded interrupt capabilities using the i960 SA/SB's interrupt controller interface.
- Parallel Port Input allows fast downloads of code or data to the EV80960SX board. The parallel port provides auto-busy and interrupt capabilities, and is a full implementation of the Centronics standard.

June 1991
Order Number: 272033-001

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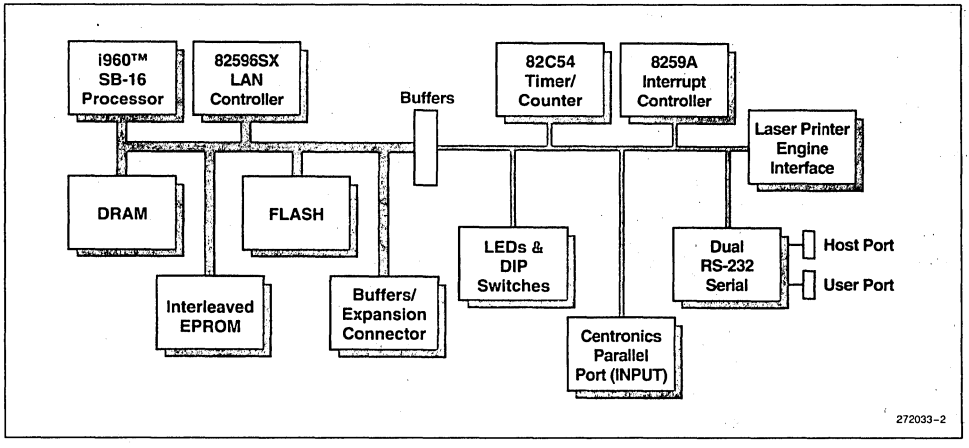
- Two serial ports provide queued and interrupt driven serial transfer at up to 128000 baud.
- 82C54 Timer/Counter provides a 32-bit counter and 16-bit counter, each with dedicated interrupts.
- Expansion/Prototype Bus (XBUS) allows expansion cards and prototype hardware direct access to the i960 SA/SB's bus and control signals. Optionally, a configurable wait state scheme provides a no glue interface to most peripherals attached to the XBUS.
- LEDs and Switches are user programmable. One 10-segment bar LED, a 7-segment LED and an 8-position switch are under program control.
- Local Area Networking (LAN) is implemented using an 82596SX LAN coprocessor.
- Laser Printer Control provides interfaces to TEC or Canon compatible laser engines.
- Monitor and Self-test diagnostics are provided for the EV80960SX in the EPROMs installed in the board.

The evaluation board comes complete with a design database included on diskette, the NINDY debug monitor on diskette and in EPROM, power and serial cables, schematics and user's manual.

The EV80960SX is a public domain design. The hardware is fully documented and provides working examples of popular memory and peripheral interfaces to the i960 SA/SB processor. The schematic and PLD database are provided with each board. The EV80960SX designs are easily duplicated and can be used directly as the building blocks for custom designs. Custom hardware can be prototyped using the expansion bus (XBUS) connector.



EV80960SX Evaluation Board